

# **DRAINAGE / FLOODING REPORT**

**FOR**

**OLD SAN MARCOS SCHOOL HOUSE**

**236 Deer Springs Road**

**San Marcos, CA 92069**

**A.P.N. 182-073-04**

**Major Use Permit No. P02-027**

**Prepared By**

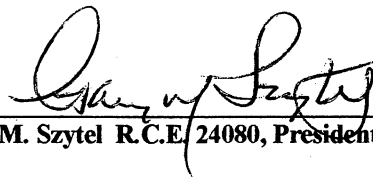
***Szytel Engineering & Surveying, Inc.***

**304 State Place**

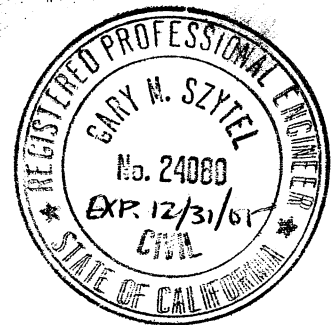
**Escondido, California 92029**

**(760) 741-6979**

**By:**



**Gary M. Szytel R.C.E. 24080, President**



**June , 2003**

**SDC DPLU RCVD 07-13-06**

**P02-027**

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## APPENDICIES

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Appendix C	County of San Diego 1:2400 Orthotopographic Mapping
Appendix D	Site Plan for Major Use Permit P02-027
Appendix E	Hydrologic Soil Group Map
Appendix F	FEMA Flood Insurance Rate Maps 06073C0784-F & 06073C0792-F
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## **PROJECT DESCRIPTION**

This project is a request for a major use permit (P02-027) to allow the ongoing use of the Old School House as a meeting place for various community groups, school tours, and other outdoor gatherings. The existing school house building will remain and no grading or construction is proposed. Please refer to the Site Plan in Appendix D.

## **PROJECT LOCATION**

The subject property contains 2.87 acres and fronts on Deer Springs Road north of the City of San Marcos in an unincorporated area of the County of San Diego. The address is 236 Deer Springs Road and the Assessor Parcel Number is 182-073-04. The parcel is situated geographically along Stevenson Creek, just upstream with its confluence with Deer Springs Creek and Twin Oaks Valley Creek. The project location is shown graphically on the Thomas Brothers Map in Appendix A and the USGS quadrangle map in Appendix B.

## **PURPOSE OF THIS REPORT**

During the review of the major use permit application by the County of San Diego, it was determined that the property is within the 100-year flood zone. A requirement was placed on the project to provide a Drainage/Flooding Report addressing the potential flooding issues for this property. Specifically, the report is required to determine the project's impact on the quantity and pattern of runoff to the surrounding area. The report must also address siltation and erosion associated with the runoff. It should describe the drainage amounts falling on the site and show how the drainage is directed on individual lots and onsite roads. It should also describe drainage structures and locate them on a project map. Potential impacts of the project and proposed mitigation measures should also be discussed.

## **PREVIOUS HYDROLOGIC AND HYDRAULIC STUDIES**

Stevenson Creek, Deer Springs Creek and Twin Oaks Valley Creek have all been studied and mapped by the Federal Emergency Management Agency (FEMA) to indicate the limits of flooding by the 100-year flood. The FEMA Flood Insurance Study was updated on June 16, 1999.

According to the Flood Insurance Study conducted by FEMA, the Type B, 24-hour storm rainfall pattern was used to develop runoff hydrographs for this area of the county. Please refer to Figure II-B-1 of the San Diego County Hydrology Manual in Appendix G. A 100-year peak flow rate of 900 cfs (cubic feet per second) was calculated for Stevenson Creek. Please refer to Table 4, Summary of Discharges, FEMA Flood Insurance Study, in Appendix H.

The drainage basin for Stevenson Creek draining into the subject property contains approximately 750 acres. The hydrologic soil type and the percent and type of

groundcover were determined based on information obtained from the soil survey performed for San Diego County (see Appendix E). According to this survey, the drainage basin for the subject property falls within three soil classifications. Soil type B comprises 38 percent of the basin, type C comprises 49 percent, and type D comprises 13 percent.

The limits of flooding for the area are shown on FEMA's Flood Insurance Rate Maps (FIRM) 06073C0784-F and 06073C0792-F (see Appendix F). The subject property lies partially within Zone AE as shown on these maps. According to the FEMA Flood Insurance Study, Zone AE is the flood insurance rate zone that corresponds to the 100-year floodplains that were determined by detailed methods. Whole foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone on the above referenced maps. The flooding limits from these maps have been transferred onto the San Diego County Orthotopographic Map in Appendix C.

A flood profile showing the projected water surface elevation for the 100-year flood, as determined by FEMA is shown on FEMA Panel No. 449P, included herein as Appendix I. The flooding limits shown on the maps in Appendix F are based upon this profile.

#### **INTERPRETATION OF PREVIOUS STUDIES AND FLOODING ANALYSIS**

The study by FEMA is applicable to the purpose and scope of this report. It was performed based upon topography prepared at a scale of 1:2400 as shown on the County of San Diego Orthotopographic and Topographic Maps. This mapping has a contour interval of 5 feet.

An onsite field reconnaissance was conducted to evaluate existing drainage structures and other features affecting flooding on and around the property. Existing culverts are shown on the on the County 1:2400 Orthotopographic Map in Appendix C.

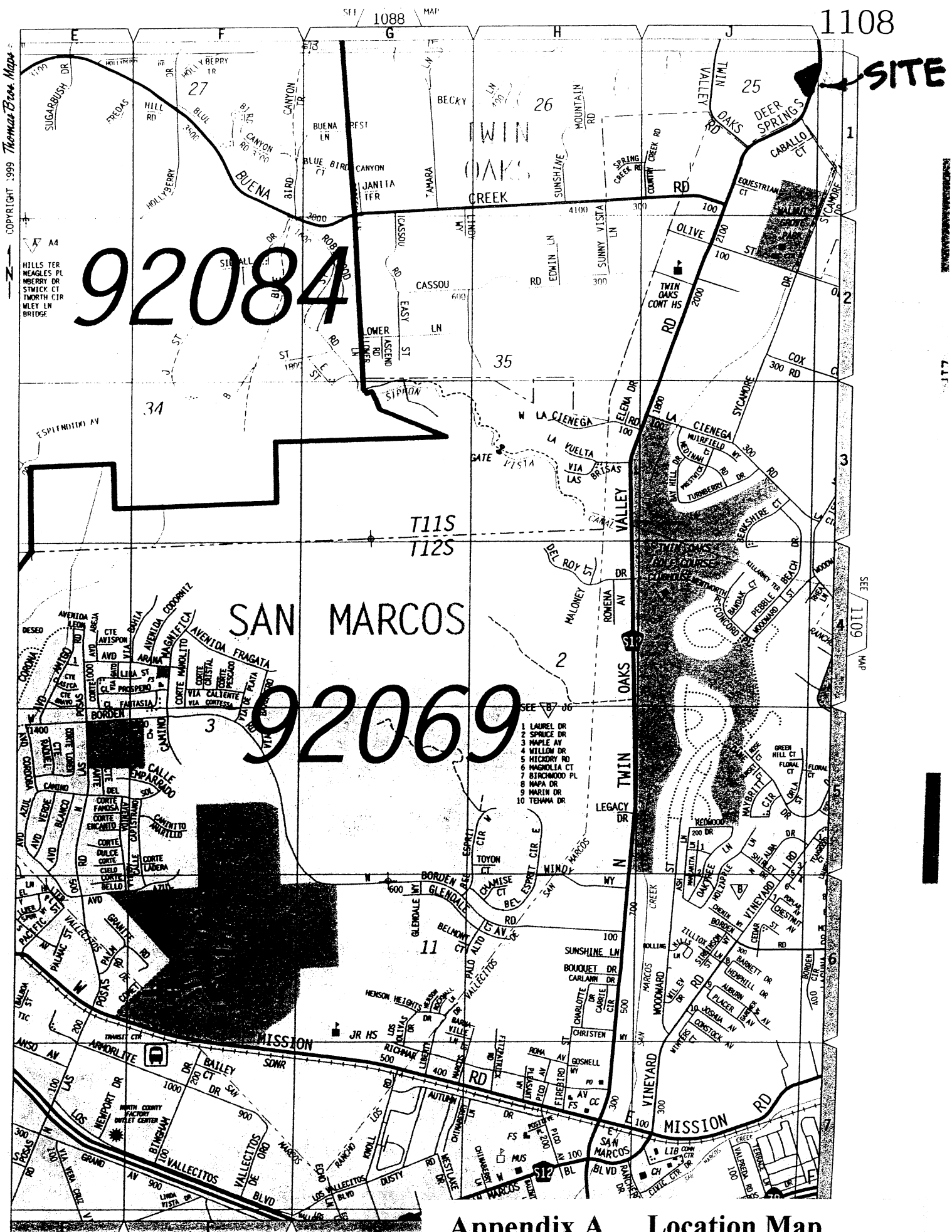
Flow in Stevenson Creek travels southerly along the westerly side of Deer Springs Road until it reaches a point approximately 700 feet north of the subject property. At that point there are two 58"x36" CMPA (corrugated metal pipe arch) culverts carrying flow under the road, where it then travels along the east side of Deer Springs Road. The capacity of these culverts, with their associated headwater depth of 4.5 feet, is approximately 184 cfs (see Chart D-2 in Appendix J). Since they will not carry the entire 100-year flow of 900 cfs, approximately 716 cfs will overtop the headwall and spread out on the property along the west side of the road. It will travel southerly and enter the subject property in a very broad swale just west of the northeast corner of the property. It will then travel to the inlet of a 24" CMP culvert under Deer Springs Road at a point approximately 300 feet south of the northeast property corner. With an available headwater depth of approximately 3.5 feet, the capacity of this culvert is only 24 cfs (see Chart D-3 in Appendix J). Since approximately 716 cfs reaches this point, approximately 692 cfs will overtop this culvert entrance and Deer Springs Road and join with the flow of Twin Oaks Valley Creek and Deer Springs Creek south of the subject property.

The existing old school house on the site lies entirely outside of and approximately three feet above the calculated 100- year flood area shown on the maps in Appendices C and F. Consequently, no flood hazard is anticipated for the building. The access driveway is within the floodplain area and will be inundated to a depth of approximately two feet during the 100-year storm.

### **PROJECT IMPACT TO SURROUNDING AREA**

The existing building on this site is situated on a low ridge between Stevenson Creek and Twin Oaks Valley Creek. Drainage originating from onsite consists of sheet flow traveling southerly and southeasterly from the high point near the northwest corner of the property. This minimal sheet drainage reaches shallow drainage swales along the southwesterly and southeasterly property lines and joins the flows of the two creeks near the southerly corner of the site. The property as a whole contributes 2.9 acres to the drainage basin of Stevenson Creek or less than 0.4 percent of the total drainage area.

This project does not propose any construction or grading. The pattern of runoff will not be changed from that which exists currently. Since no grading is proposed, and due to the very flat slopes on the property, siltation and erosion as a result of drainage originating from onsite are expected to be non-existent or very minimal. Consequently, and as a result of the minimal onsite drainage area, no significant project impacts on surrounding properties are anticipated. The project as described requires no mitigation for drainage impacts.



92084

SAN MARCOS

92069

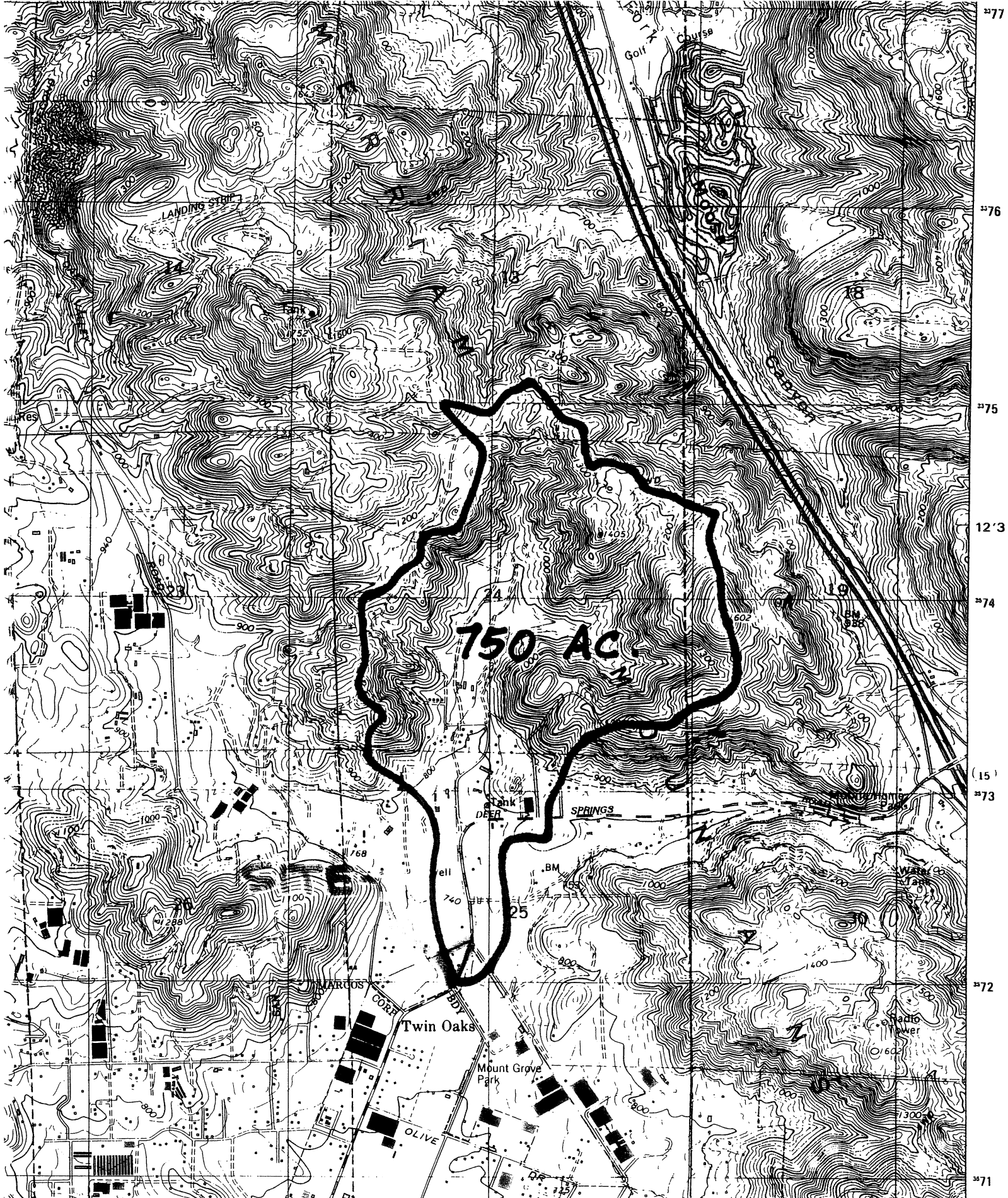
SITE

- 1 LAUREL DR
- 2 SPURCE DR
- 3 MAPLE AV
- 4 WILLOW DR
- 5 HICKORY RD
- 6 MAGNOLIA CT
- 7 BIRCHWOOD PL
- 8 MAPA DR
- 9 MARTIN DR
- 10 TEHAMA DR

Appendix A

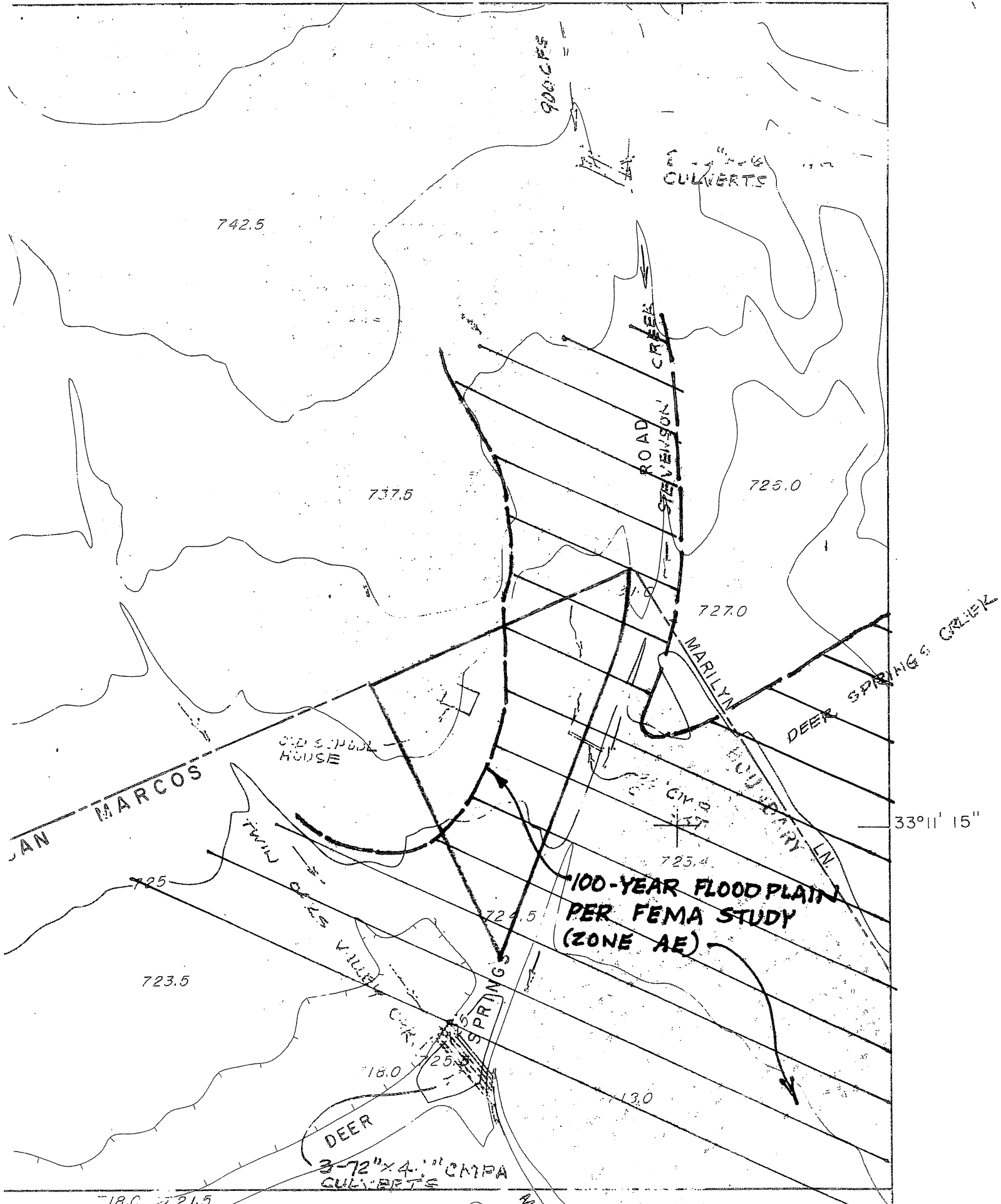
Location Map

(Thomas Bros. Map page 1108)



Appendix B

Location Map  
(USGS 7.5-minute Quadrangle Map)





USE: RECREATION	AYL
ANIMAL: REGULATION	
DEVELOPMENT: 1	25
DEVELOPMENT: 2	4AC
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DEVELOPMENT: 100	

# OLD SAN MARCOS SCHOOL MAJOR USE PERMIT

PROPOSED USE: COMMUNITY RECREATION/MEETING  
SITE ADDRESS: 236 DEER SPRINGS ROAD  
ASSESSOR'S TAX PARCEL NUMBER: 162-073-04  
AREA: 2.87 ACRES

OWNER: WILLIAM & MARY GOODSON  
375 RANGER ROAD, FALLBROOK CA 92028  
TELEPHONE C/O 858-496-2525

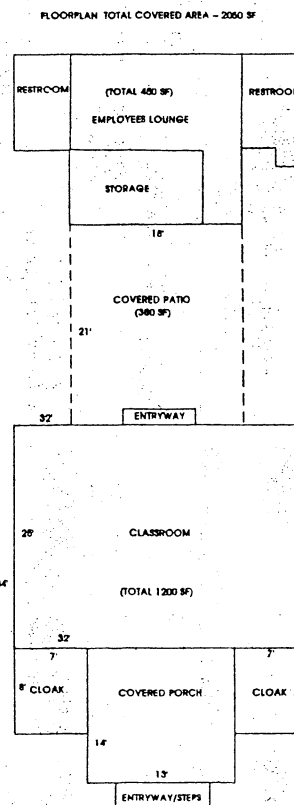
APPLICANT: KAREN TORK  
236 DEER SPRINGS RD, SAN MARCOS CA 92069  
TELEPHONE C/O 858-496-2525

PLANNERS: TRS CONSULTANTS  
7867 CONVOY CT. #312, SAN DIEGO CA 92111  
TEL: 858-496-2525  
FAX: 858-496-2527  
EMAIL: THURE@TRS-SANDIEGO.COM

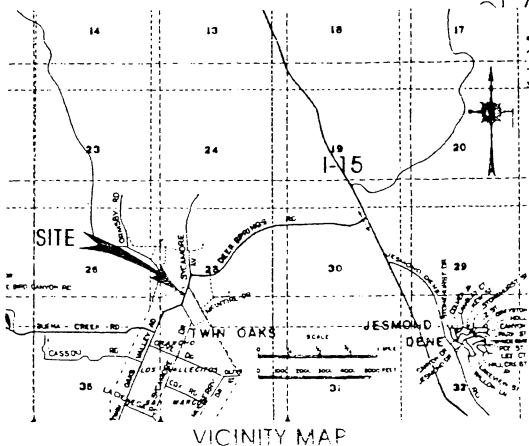
ENGINEER: SZYTEL ENGINEERING  
304 STATE PLACE, ESCONDIDO CA 92029  
TEL: 760-741-6979  
FAX: 760-741-3722

WATER: VALLECITOS WATER  
SEWER: SUB-SURFACE DISPOSAL SYSTEM  
FIRE: SAN MARCOS

LEGAL DESCRIPTION: PORTION OF LOT 1 BLOCK 37 OF  
RANCHO LOS VALLECITOS DE SAN MARCOS MAP NO. 806  
COMMUNITY PLANNING AREA: NORTH COUNTY MET  
PLAN DESIGNATION: #17 ESTATE  
REGIONAL DESIGNATION: "EDA"



① 8' Victorian Style  
Light Pole with  
3-100 watt bulbs



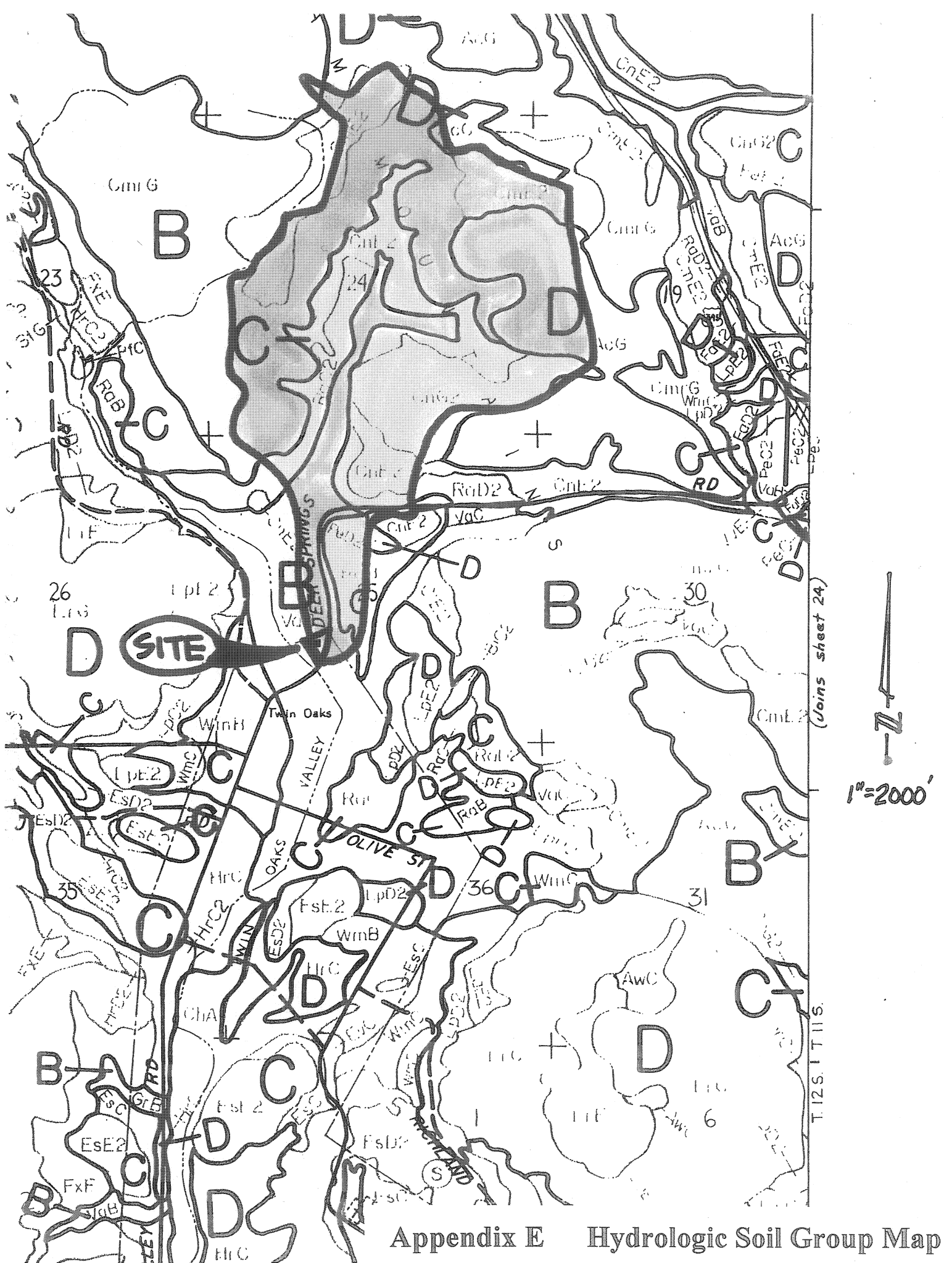
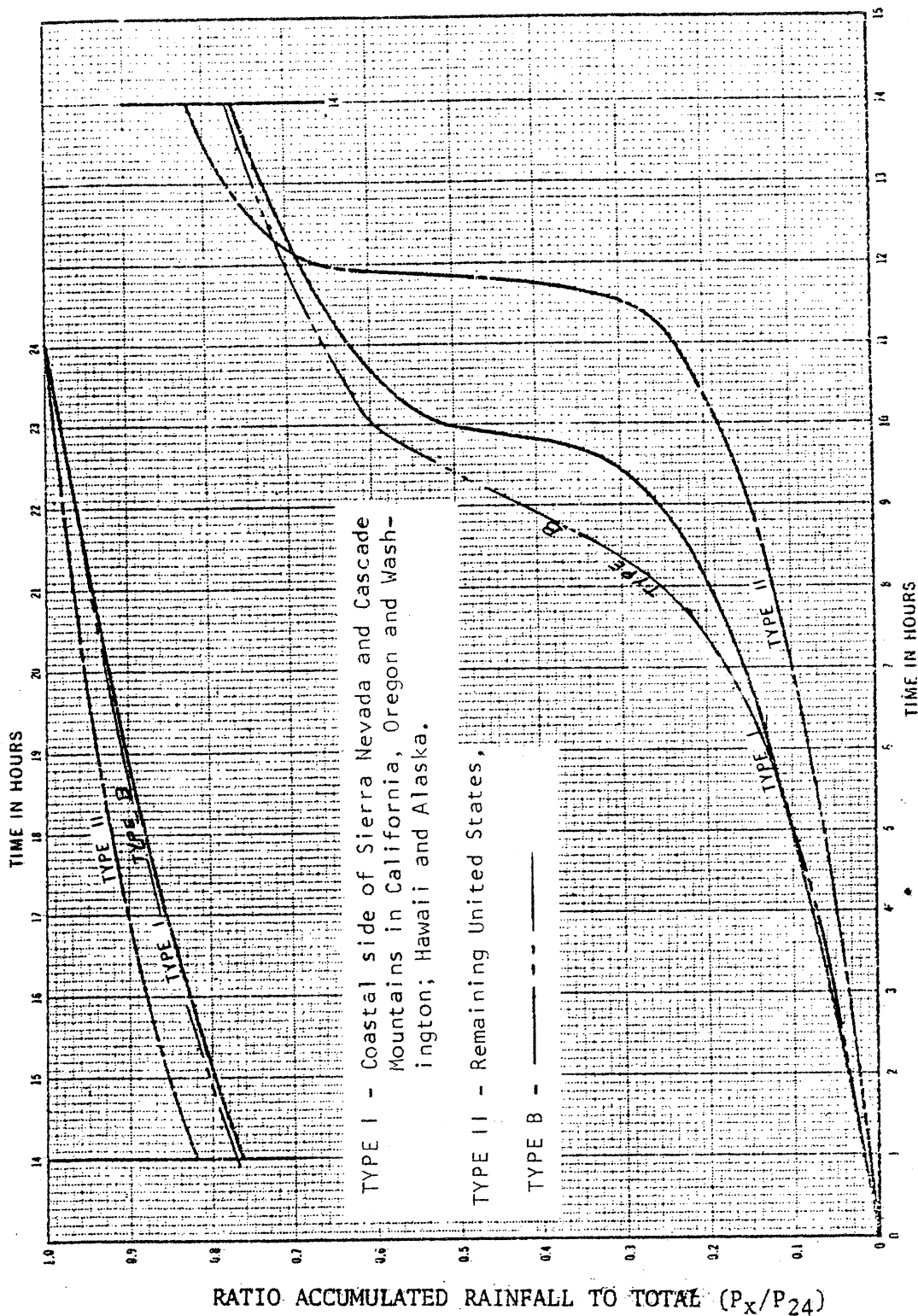




Figure II-B-1



TWENTY-FOUR HOUR RAINFALL DISTRIBUTION (SCS).

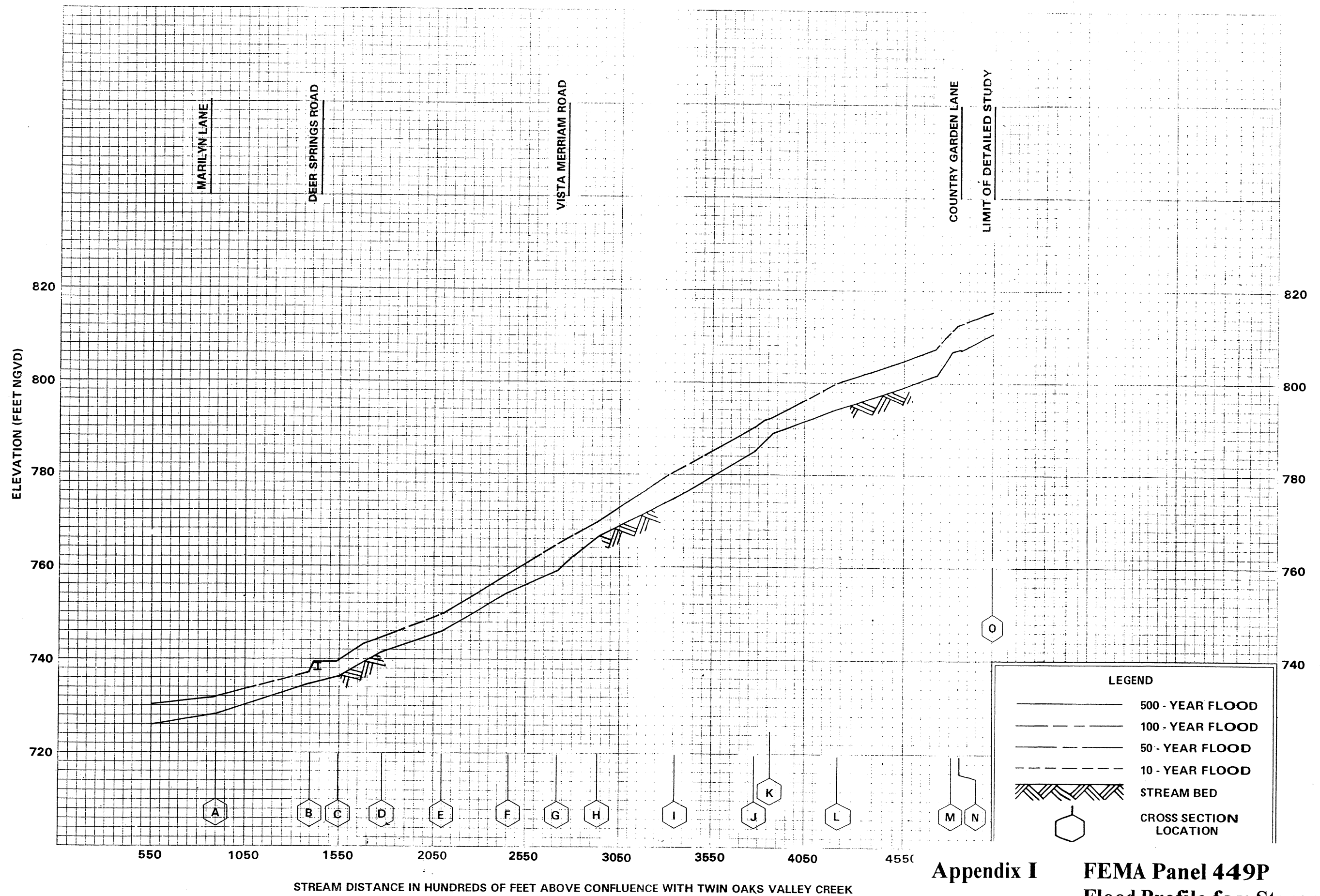
COUNTY OF SAN DIEGO  
DEPARTMENT OF SANITATION  
AND FLOOD CONTROL

Table 4. Summary of Discharges (Cont'd)

Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (cfs)			
		10-Year	50-Year	100-Year	500-Year
South Las Chollas Creek					
Above Confluence with Las Chollas Creek	10.9	2,000	3,900	5,300	9,500
Above Confluence with Encanto Branch	3.3	730	1,400	1,900	3,400
At Kelton Road	2.6	580	1,100	1,500	2,700
South Tributary to Santa Maria Creek					
At Mouth	9.3	700	3,400	5,800	15,000
Spring Valley Creek					
Below Confluence with Casa de Oro Creek	7.1	1,300	2,600	3,600	9,300
Steele Canyon Creek					
At Mouth	2.7	--1	--1	2,980	--1
Stevenson Creek					
At Mouth	1.2	--1	--1	900	--1
Sunrise Overflow					
At Hollister Street	--2	50	435	700	1,800
At Iris Avenue	--2	0	300	550	3,000
Sweetwater River (Above Reservoir)					
At Broadway	219.0	1,200	21,000	35,000	60,000
At Intersection of Sweetwater and Bonia Roads	197.0	1,200	21,000	35,000	60,000
Below Confluence with Spring Valley Creek	194.0	1,200	21,000	35,000	60,000
Above Sweetwater Reservoir	174.0	5,600	21,500	29,500	53,600
Below Confluence with Harbison Creek	138.0	5,500	21,000	29,000	53,000
Below Confluence North Fork	131.0	5,300	20,500	28,000	50,000

<sup>1</sup>Data Not Available<sup>2</sup>This Area is Subject to Overflow Flooding and Therefore, Does Not Have a Defined Contributing Drainage Area





**FLOOD PROFILES**

**STEVENSON CREEK**

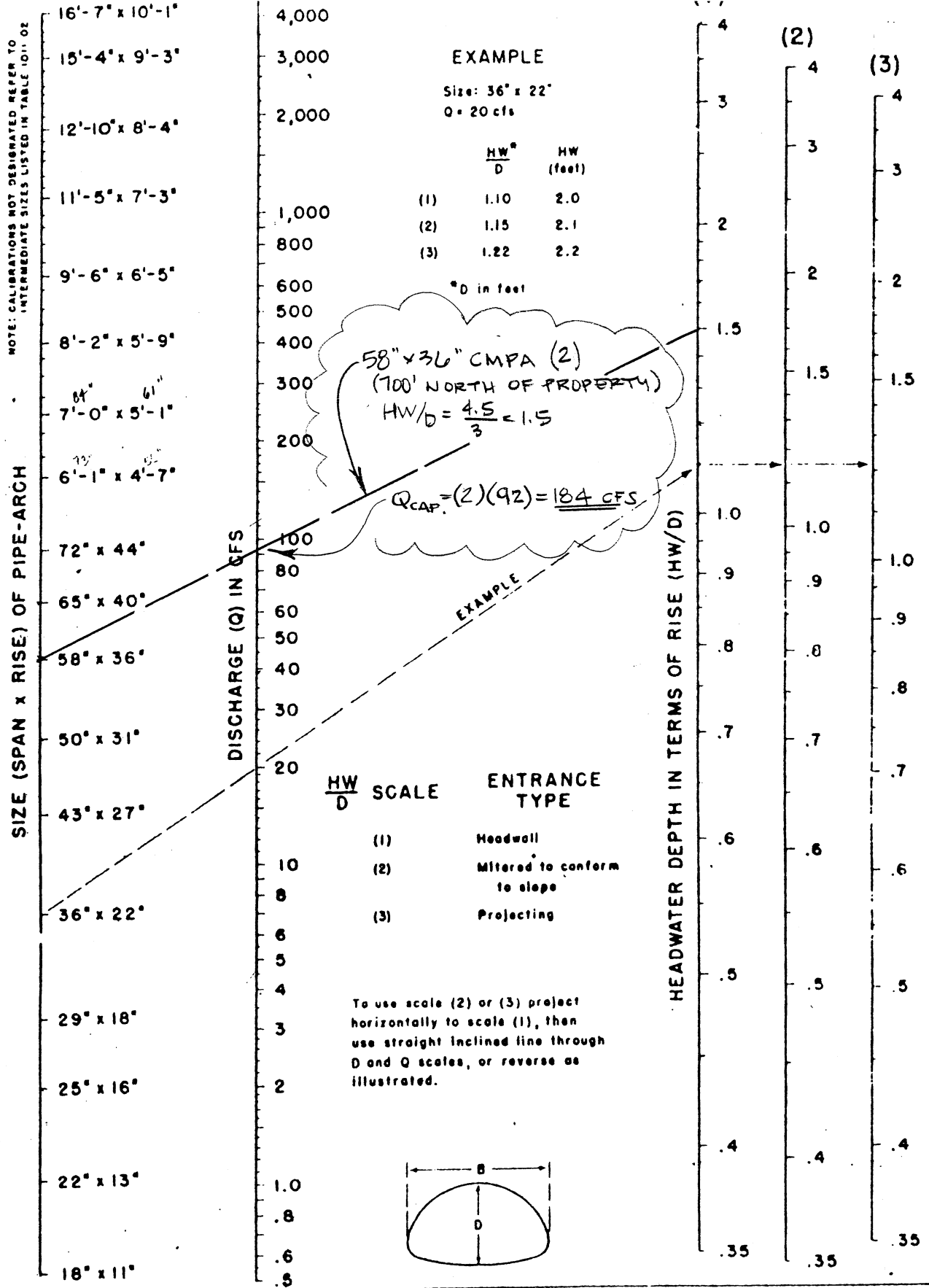
**FEDERAL EMERGENCY MANAGEMENT AGENCY**

**SAN DIEGO COUNTY, CA**

**AND INCORPORATED AREAS**

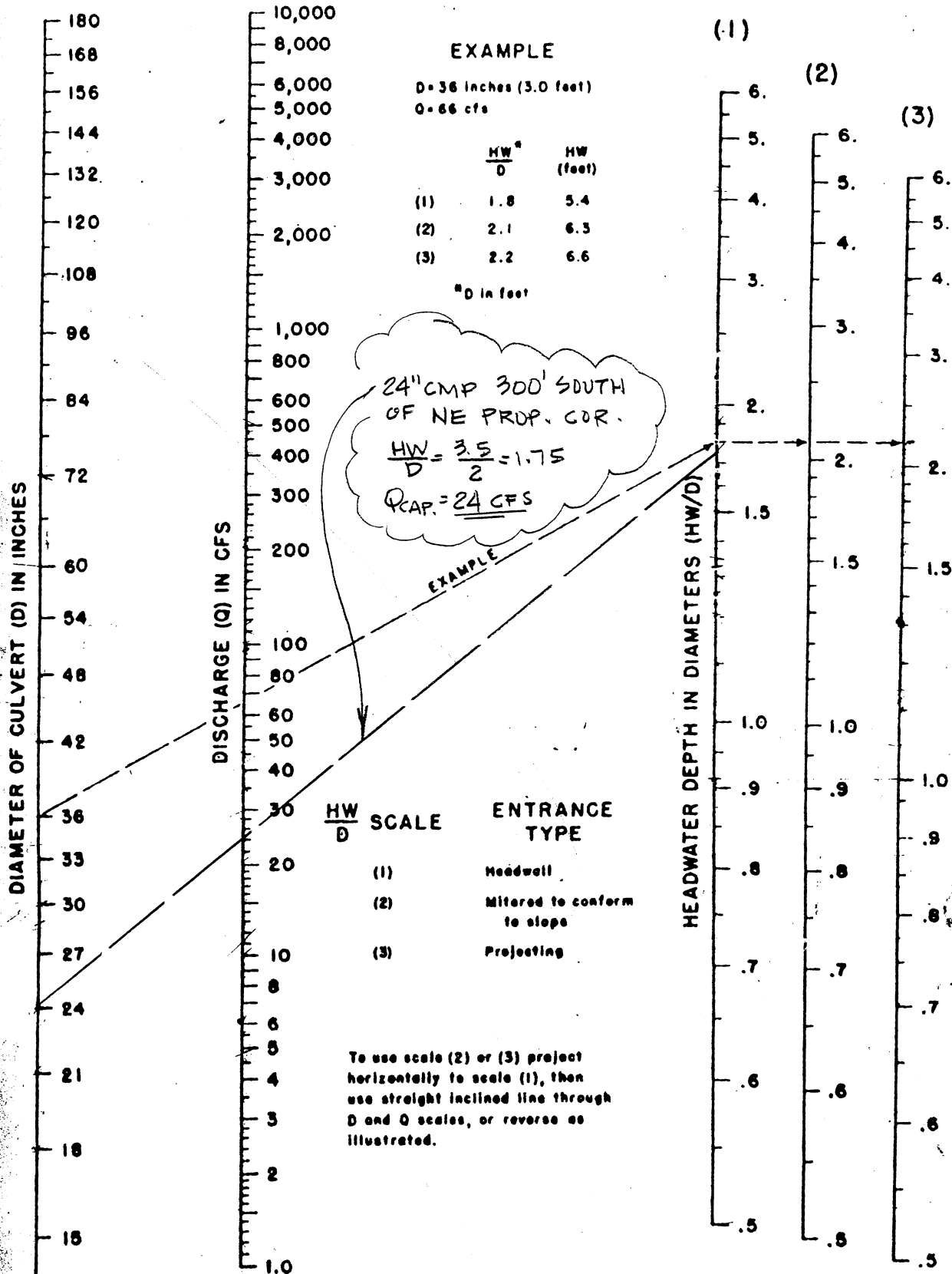
**Appendix I FEMA Panel 449P**

**Flood Profile for Stevenson Creek**



HEADWATER DEPTH FOR  
C. M. PIPE-ARCH CULVERTS  
WITH ENTRANCE CONTROL  
CHART D-2.

MAY 1956



**HEADWATER DEPTH FOR  
C. M. PIPE CULVERTS  
WITH ENTRANCE CONTROL**

MAY 1956

CHART D-3